INSTALLATION INSTRUCTIONS

SLAB TO CEILING CARRIER FOR HU5, HU6 and HU8-F/FR PENDANT SERVICE SYSTEMS

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SECTION 1: SAFETY

Before unpacking and installing the equipment, please carefully read these instructions.

Due to the complexity and potential risks associated with the installation of pendants, installation by Hutz Medical Technicians is mandatory, unless agreed in writing at the quotation stage with the Hutz Medical Service Manager.

The installation crew should comply with the safety, health and environmental requirements of the site in question. Approval of the site’s safety official should be obtained prior to commencement of the installation.

Installation, commissioning, operation, servicing and maintenance of this equipment are to be carried out by suitably competent personnel only.

The minimum specification for the reinforced concrete slab is 25MPA. The slab must be able to support the weight of the fully laden pendant – refer the Product Data Sheet for the pendant to be installed which is obtainable from the Hutz Medical Service Department (refer to cover page for contact details).

Minimum reinforced concrete slab thickness to be 210mm to accommodate the fixing bolts.

Written approval from the Structural Engineer is required before drilling into the reinforced concrete slab.

The Slab to Ceiling Carrier installation must be signed off by the installation team leader to authorise the next stage of the installation of the pendant system to proceed – refer to the example format at the end of this manual – to be retained by the installation manager as a quality / safety record.

The following symbols are used in these instructions and on the product in question. The meaning of these symbols are defined below:

![CAUTION!](https://via.placeholder.com/15)

Failure to comply with this warning could result in serious or fatal injury

![CONSULT INSTRUCTIONS FOR USE!](https://via.placeholder.com/15)

Failure to comply with this notification could result in injury or damage to product

SECTION 2: DESCRIPTION

The slab to ceiling carrier is a steel structure that is fixed to a reinforced concrete slab in order to hold and support the pendant assembly.

This instruction applies only to reinforced concrete slab mounting. For other types of mounting please contact Hutz Medical Service Department (Refer to cover page for contact details).
SECTION 3: PRODUCT IDENTIFICATION

Slab to ceiling carrier assembly for HU5-S1, HU5-S2, HU6-S1, HU6-S2 and HU8-F, HU8-FR.
*For HU8-F and HU8-FR ceiling distance from slab < 600mm, refer section 6.6

Slab to ceiling carrier assembly for
HU5-FT1, HU5-FT2, HU5-T11, HU5-T12, HU5-T22
and
HU6-T11, HU6-T12, HU6-T22

Slab mount plate

Mounting tube: 6 of
plus M16 threaded rod: 6 of

Ceiling plate
SECTION 4: TOOLS REQUIRED

The following tools should be available for the pendant slab to ceiling carrier assembly installation:

- Laser Pointer;
- SDS drilling machine (hammer drill);
- SDS 18 Ø 4-tipped Drill Bit (drilling depth 125 mm in the reinforced concrete slab section);
- SDS socket adaptor (see below);

- 24mm tube socket;
- Blow pump (see example below) or other suitable compressed air source – to remove dust from the holes drilled in the slab;

- 24mm ring / flat combination spanner;
- Torque wrench (capacity at least 120 Nm). An impact wrench is recommended;
- Spirit level;
- Metal detector.
SECTION 5: PRE-INSTALLATION

5.1 Remove the slab to ceiling carrier components from the packing and place them on the floor, flat surface or table. The packaging is to be discarded for recycling purposes according to respective National Environmental Regulations.

5.2 Check to ensure that the slab mount plate and ceiling plate shown in Section 3, as well as the following components, have been supplied.

5.3 Hilti Chemical Anchor pack

⚠️ Due to expiry date of the chemical sachets, these packs are supplied when the installation is due. Do not use the sachet if past the expiry date. Contact Hutz Medical Service Department (refer to cover page for contact details).

5.3.1 Chemical HVU sachets – 2 per pack, 6 total

5.3.2 Chemical anchor bolts HAS-E M16 x 125/38: 2 per pack, 6 total
5.3.3 M16 nuts: 2 per pack, 6 total
5.3.4 M16 washers: 2 per pack, 6 total

5.4 Additional hardware

5.4.1 Cupped washers - large (colour gold): 6 of;
5.4.2 Cupped Washers -small (colour silver): 6 of;
5.4.3 M16 “½” nuts: 6 of;
5.4.4 M16 nuts: 12 of;
5.4.5 Washers M16 x Ø37: 6 of;
5.4.6 *M16 threaded rod: 6 of;
5.4.7 *Mounting tube: 6 of.

*Items 5.4.6 and 5.4.7: The lengths are according to the required distance between the slab mount plate and ceiling plate.
If any of the above mentioned items have not been packed with the unit or any items have been damaged, contact HUTZ Medical Service Department (refer to cover page for contact details).
6.1 **Installation of the chemical anchor bolts for fixing the slab mount plate to the slab**

6.1.1 Place the slab mount plate on the floor and position it as per the site floor plan.

6.1.2 Use a laser pointer to project vertically from a minimum of 6 of the pre-cut holes in the slab mount plate, onto the slab – see diagram below. Mark the hole positions on the slab.

6.1.3 Use the metal detector to detect if any of the holes would strike the reinforcing rods. If so, re-mark another hole position to the left or right of the initial projected hole as indicated below.

6.1.4 Place the slab mount plate one side to avoid contamination and drill the 6 holes vertically into the slab. Refer to Section 4 for the drilling specifications. Ensure that the drill is not bent and runs true, so as to not drill oversize.
SECTION 6: INSTALLATION INSTRUCTIONS

6.1.1 Lock 2 x M16 Nuts (items 5.3.3 & 5.4.3), with a M16 washer (item 5.3.4) in-between, on the machined groove side on the chemical anchor bolt (item 5.3.2).

6.1.2 Push the chemical HVU sachet (item 5.3.1) point-first into the drilled hole, flush with the slab surface as illustrated below.

6.1.3 Without delay (in case the 2-part chemicals start reacting due to the sachet being damaged when inserting in the hole) turn the chemical anchor bolt into the chemical anchor sachet, using a SDS drilling machine with the SDS socket adaptor and 24mm tube socket. The chemical anchor bolt has to be turned into the chemical anchor sachet to the machined groove on the chemical anchor bolt, which indicates the minimum insertion depth required – see below.

6.1.4 Repeat steps 6.1.5 to 6.1.7 for the other 5 holes.

6.1.5 Allow the chemical anchor to cure for a minimum period of 1 hour before installing the slab mount plate. If the anchor is disturbed prior to the 1 hour minimum curing period, the pendant may become dislodged from the ceiling once the full payload is applied.
SECTION 6: INSTALLATION INSTRUCTIONS

6.2 **Installation of the slab mount plate onto the slab**

6.2.1 After the minimum 1 hour curing period, use 2 spanners to unlock the 2 x M16 Nuts and remove the nuts and washers from the Chemical Anchor Bolts.

6.2.2 Lift the plate to the slab, with the **large flange of the threaded stubs facing upward**, allowing the chemical anchor bolts to pass through the pre-cut holes in the plate. Secure the plate with the 6 x M16 nuts (item 5.3.3) and washers (item 5.3.4) on the chemical anchor bolts. **NB: hand-tighten or lightly “nip” the nuts.** Refer diagram below

6.2.3 The final torque of 80 Nm must only be applied the day following the insertion of the Chemical Anchor Bolts into the Chemical Anchor Sachets, to ensure the Chemical Anchors are fully cured.

**Warning!** Contact Hutz Medical Service Department if the final torque of 80Nm cannot be reached as it could mean that the Chemical Anchor bolt is not secure in the concrete slab, and the pendant may become dislodged from the ceiling once the full payload is applied.

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**Diagram:**
- Threaded stub large flange
- Slab mount Plate
- Slab
- Threaded stub large flange flush against the slab

**Items:**
- HU5-S1, HU5-S2, HU6-S1, HU6-S2, HU8-F, HU8-FR
- HU5-FT1, HU5-FT2, HU5-T11, HU5-T12, HU5-T22
- HU6-T11, HU6-T12, HU6-T22
6.3 **Installation of the Ceiling Plate Securing Rods**

6.3.1 Turn a M16 hexagon nut (item 5.4.4) onto a M16 threaded rod (item 5.4.6) to a distance of not less than 30mm from the rod end.

6.3.2 Turn the M16 threaded rod into the threaded stub in the slab plate, until it touches/bottoms-out on the concrete slab or flush with the top of the large flange.

6.3.3 Lock the M16 threaded rod by tightening the M16 nut.

6.3.4 Repeat for the other 5 Threaded Rods

**HU5-S1, HU5-S2, HU6-S1, HU6-S2, HU8-F, HU8-FR**

**HU5-FT1, HU5-FT2, HU5-T11, HU5-T12, HU5-T22, HU6-T11, HU6-T12, HU6-T22**
SECTION 6: INSTALLATION INSTRUCTIONS

6.4 Installation of the mounting tubes

6.4.1 Slide a mounting tube (item 5.4.7) and a cupped washer-large (item 5.4.1- colour gold) with the chamfer to the top, over the M16 threaded rod, and secure it with a M16 "½" Nut (item 5.4.3) – View A

6.4.2 Repeat this for the other 5 mounting tubes.

HU5-S1, HU5-S2, HU6-S1, HU6-S2, HU8-F, HU8-FR

HU5-FT1, HU5-FT2, HU5-T11, HU5-T12, HU5-T22
HU6-T11, HU6-T12, HU6-T22
6.5 **Installation of the ceiling plate**

6.5.1 Lift the ceiling plate and allow the 6 M16 threaded rods to enter the pre-cut holes as illustrated below.

6.5.2 Fit a cupped washer – small (item 5.4.2, colour silver) *with the chamfer to the top*, followed by a plain washer (item 5.4.5), then a M16 nut (item 5.4.4), to the threaded rod. Ensure that the cupped washer locates into the pre-cut hole in the ceiling plate as illustrated below as illustrated below;

6.5.3 Repeat this for the other 5 threaded rods.

6.5.4 **NB:** Torque each of the 6x M16 nuts to 120 Nm.

**HU5-S1, HU5-S2, HU6-S1, HU6-S2, HU8-F, HU8-FR**

**HU5-FT1, HU5-FT2, HU5-T11, HU5-T12, HU5-T22**

**HU6-T11, HU6-T12, HU6-T22**
6.6 Installation of the HU8-F and HU8-FR carrier: ceiling distance from slab less than 600mm:

6.6.1 The marking on the slab for drilling, fixing the slab mount plate to the slab, and installation of the mounting tubes are similar to Sections 4, 5 and 6.1 – 6.4, except that there are 4 chemical anchors and 4 mounting tubes.

6.6.2 Refer below for diagram of the slab mount plate / mounting tube assembly. Note, there is no carrier plate.

6.7 Installation sign off

6.7.1 The installation Team Leader is to complete and sign the carrier section of the Pendant Installation Checklist (ASF-26). A copy is obtainable from the Hutz Medical Service Department. Report all problems to Hutz Medical Service Department. Forward signed copy to Hutz Medical Service Department (refer to cover page for contact details).

6.7.2 The carrier is now ready for the next installation phase – refer to Pendant Swing Arm Installation Manual (if swing arm is applicable) or Service Pillar Installation Manual (if swing arm is not applicable) for next stage of the Pendant Service System installation.